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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,060	04/05/2001	Huang Chih-Wen	YUSO-111	3444
7590	07/15/2004		EXAMINER LEE, CHEUKFAN	
Raymond Sun 12420 Woodhall Way Tustin, CA 92782			ART UNIT	PAPER NUMBER
			2622	3
DATE MAILED: 07/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/827,060

**Applicant(s)**

HUANG, CHIH-WEN

**Examiner**

Cheukfan Lee

**Art Unit**

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. Claims 1-6 are pending. Claim 1 is independent.

2. The drawings are objected to.

Fig. 2 should be labeled with – PRIOR ART --. See page 1, line 10 of the specification.

3. The abstract is objected to because of the following:

Lines 5-6 of page 7, “charge coupling” device” should read – charge-coupled device --, a standard term in the art;

Line 9 of page 7, “two mirrors” should be substituted with -- the first and second mirrors – if the two mirrors are referring to the first and second mirrors of the claim;

Line 13 of page 7, the “reflection area” should also refer to “the second mirror” as does the “transparent window”;

Lines 13-16, the sentence “The second ... on the first lens” does not flow well; the order of reflection of the light does not seem to be correctly described, and it is unknown what “the second lens” and “the first lens” are referring to since there is only “a camera lens” set forth on line 5 of the page.

4. The disclosure is objected to because of the following informalities:

Page 1, line 14, the term “charge coupling device” should read – charge-coupled device --, a standard term in the art. Applicant should check for the same or other minor

errors throughout the specification. Applicant should also check for grammatical errors throughout the specification.

Page 1, lines 10-23, numerals "21" and "22" are used to designate both "two reflection mirrors" and "two lens[es]". From the drawings, it is clear that elements "21" and "22" are reflection mirrors, not lenses.

Note that "two-lens" and "a first lens and a second lens" are claimed in the claim(s). It is unknown whether Applicant intends to claim mirrors or lenses.

Appropriate correction is required.

5. Claims 1-6 are objected to.

In claim 1, "two-lens" and "a first lens and a second lens" are recited on line 2 (the preamble) and 9 of the claim, respectively. There is "a camera lens" recited in the claim body. As the drawings are understood, there are no "first lens" and "second lens" but there are "first mirrors" and "second mirrors". There seems to be a Chinese-to-English translation problem. The word "mirror" was erroneously translated to "lens". In the art rejection below, "lens" in the "two-lens", "first lens" and "second lens" are treated as mirrors.

Still in claim 1, "the computer" may be an error in Chinese-to-English translation, since the term "computer" is not found in the specification.

Claims 2-6 are objected to as being dependent upon an objected base claim.

6. Claims 1-6 are objected to because of the following:

In claim 1, line 2 of the claim, "the optical scanner" lacks antecedent basis;

Line 2, "comprising;" should read – comprising: --;

Line 5, the word "will" should be deleted;

Line 6, "charge coupling device" should read – charge-coupled device --;

Line 6, "which will transfer" should read – which transfers --;

Line 6, "the signal" lacks antecedent basis;

Line 7, "the digital signal" lacks antecedent basis;

Line 7, "can be" should be replaced with – is --;

Lines 7-8, "the computer" lacks antecedent basis; "computer." should be –  
computer; --;

Lines 6-8, a charge-coupled device itself is not capable of converting light  
into a digital signal; a charge-coupled device converts light to an electrical signal  
(analog signal), and an analog-to-digital converter (A/D) converts an analog signal to a  
digital signal;

Lines 9-15, there should be no period "." between the beginning of line 9  
and the end of line 15; or on line 9, after "second lens", a colon -- ; -- should be used  
instead of a period ".", and one or more – wherein ...-- clause should be used for  
languages beginning from "The relative angle ..." to the end of line 15 "element;"; and if  
a wherein clause is used, -- and – should be used after "element;" of line 15, following  
which another one or more – wherein ...-- clause should be used for the limitations  
starting from line 16 to line 21, i.e., from "the main point" to "the second mirror.";

(For example, lines 9-15 may read – wherein a relative angle of corresponding two mirrors is arranged so that ...is reflected in an appropriate direction, and in the mean time, in the course ....". Note that there should be no period "." within a single wherein clause, unless it is used at the end of the claim. More than one wherein clause may be used in a claim.)

lines 11 and 18, "can be" and "can reflect" should be replaced with – is – and – reflects --, respectively; and

lines 19-20, "the penetration are" lacks antecedent basis.

In claim 2, an object (as in an object in sentence structure) should be used after the word "wherein";

Line 3 of the claim, "can be" should be replaced with – is --;

Lines 3-4, complete sentences are not allowed in a claim unless it is used within a – wherein – clause;

Line 3, a period "." is allowed only at the end of the claim;

Claim 3 has the same claim structure problem as claim 2, which should be corrected in the manner similar to claim 2.

In claim 4, "the coated materials" lacks antecedent basis since there is only one "material" in claim 3 upon which claim 4 depends.

In claim 6, "mirror" should refer to the "reflection area" of claim 3 upon which claim 6 depends.

Claim 5 is objected to as being dependent upon an objected claim.

Claims 1-6 are objected to as being dependent upon an objected base claim.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5 and 6, insofar as the claims are understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (U.S. Patent No. 4,812,917).

Please note that the format of the rejection is not the same as a proper format of a claim.

Regarding claim 1, Suzuki discloses an apparatus of two-mirror and multi-reflection of an optical scanner (Fig. 12, col. 10, line 40 – col. 11, line 31). The scanner comprises a light source (140) for illuminating a document (134), a camera lens (156 in 158) for focusing light reflected from the illuminated document, a charge-coupled device (160) for converting the light reflected from the document into an electrical signal, a first mirror (152) and a second mirror (base plate 138). A relative angle of the first and second mirrors (152 and 138) is arranged so that the light reflected by the document is reflected in an appropriate direction and reflected two or more times between the first mirror and the second mirror. At least the camera lens (156) focuses the reflected light onto the charge-coupled device (160). The second mirror (138) has two portions (two areas), a portion that is a transparent window (left portion of plate 138 in Fig. 12) and a

reflection portion (152). The transparent window is positioned between the original document (134) and the light source (140). The light reflected by the document passes through the transparent window of the second mirror (138), gets reflected by the first mirror (152) and then reflected back to the reflection portion (area) (152) of the second mirror (138).

As to the claimed "digital signal" and "computer", see objection to the claims. These claim limitations are not given any patentable weight in this rejection.

Regarding claim 2, the document transport roller (144 in Fig. 12) reads on the claimed paper-feeding roller.

Regarding claims 3, 5 and 6, as discussed for claim 1 above, the second mirror (138) has two portions, the transparent window (the left portion of plate 138) through which light passes or is transmitted, and the reflection portion (150). The reflection portion (150) is coated with a reflective film by deposition of a layer of aluminum on the lower or bottom surface of the second mirror (plate 138) (col. 11, lines 2-10).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 4,812,917) in view of well known art.

Regarding claim 4, Suzuki discussed for claim 1 above differs from the claimed invention in that the reflection portion (150) of the second mirror (138) is coated with a material (aluminum) other than mercury. However, the examiner took Official Notice of the fact that reflecting mirrors produced by coating a surface of the mirror with mercury are notoriously well known in the art because of the light reflecting property of mercury. It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the portion (150) of Suzuki to produce the reflection portion (150) as is known in the art because of its good light-reflecting effect.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Kerschner et al. (U.S. Patent No. 5,723,859) discloses a line contact hand-held scanning device having a light path substantially perpendicular to the orientation of the object at a line portion, the device comprising two reflecting mirrors for reflecting light two more times therebetween.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (703) 305-4867. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee  
July 7, 2004

  
*Cheukfan Lee*